

# People's perception of grassland ecosystems and their services



LIFE  
Viva  
Grass





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# PEOPLE'S PERCEPTION OF GRASSLAND ECOSYSTEMS AND THEIR SERVICES

In light of the LIFE Viva Grass project activities and outcomes



Riga, 2019



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# Introduction

The LIFE Viva Grass project, implemented from June 2014 until April 2019, aims to support the maintenance of biodiversity and ecosystem services provided by grasslands, through encouraging ecosystem-based planning and economically viable grassland management in Estonia, Latvia and Lithuania. Furthermore, the project demonstrates opportunities for multifunctional use of grasslands as a basis for sustainability of rural areas and stimulus for local economies. The LIFE Viva Grass was developed as a “policy governance” project thus having a strategic and demonstrative nature.

One of the project objectives was to raise the awareness and capacity of planners and local stakeholders on the management of grassland ecosystems and services they provide. For that, a range of activities was implemented: visitors’ days, workshops and training sessions with local, regional, national and international participation. A set of publications was produced to disseminate the concepts and knowledge about the grassland ecosystems, ecosystem services and benefits, as well as planning and management. In order to evaluate social awareness about the importance and benefits of maintenance of grasslands, a special survey of farmers and public authorities was carried out.

Management of grassland delivers direct and indirect economic and social benefits, at the same time being an important activity for safeguarding biodiversity. The benefits can be assessed within the concept of ecosystem services which helps planners and decision-makers to assess the trade-offs between different management options, as well as plan and supervise land use and management practices in a comprehensive and sustainable way. Land use and management practice impacts upon the structure and conditions of grassland ecosystems, which in turn determine what kind of ecosystem services and benefits can be derived by society, including its social and economic well-being (Figure 1).

With this brochure we would like to highlight the importance of people’s understanding and perception of grassland ecosystems and their services. As the project involved a great amount of informing, consulting and engaging with stakeholders to promote multi-functionality of the grasslands, we would like to reflect on the approach and the results achieved about people’s awareness of the issue.

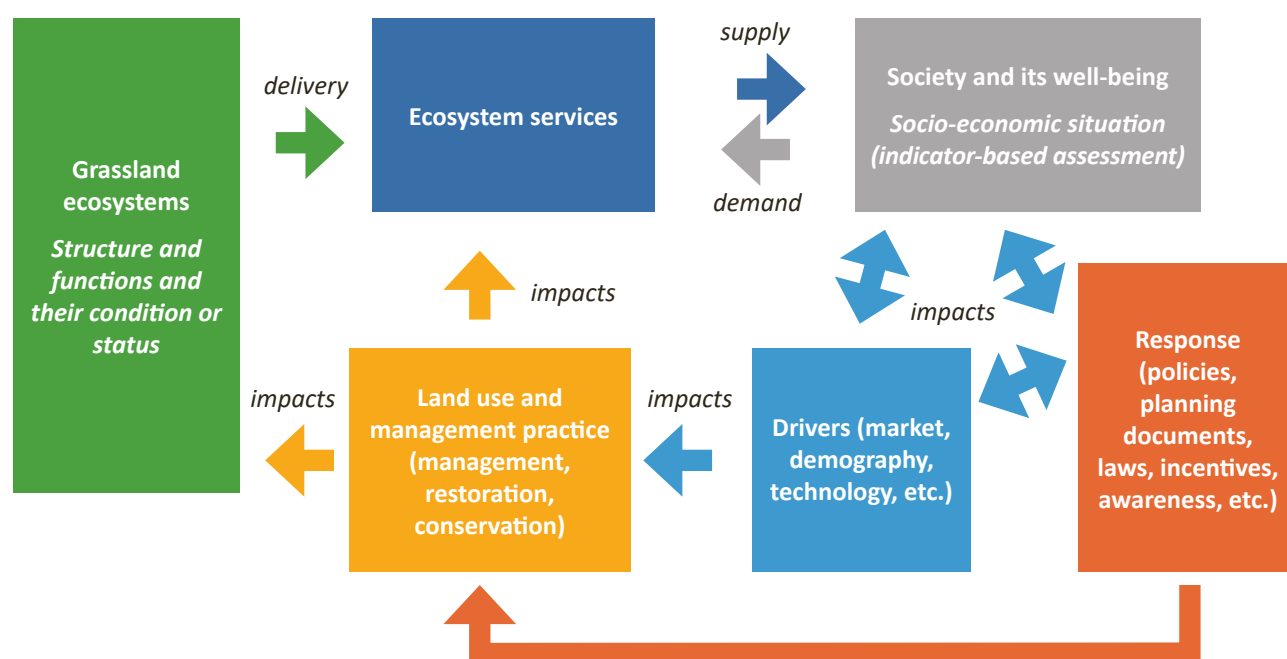


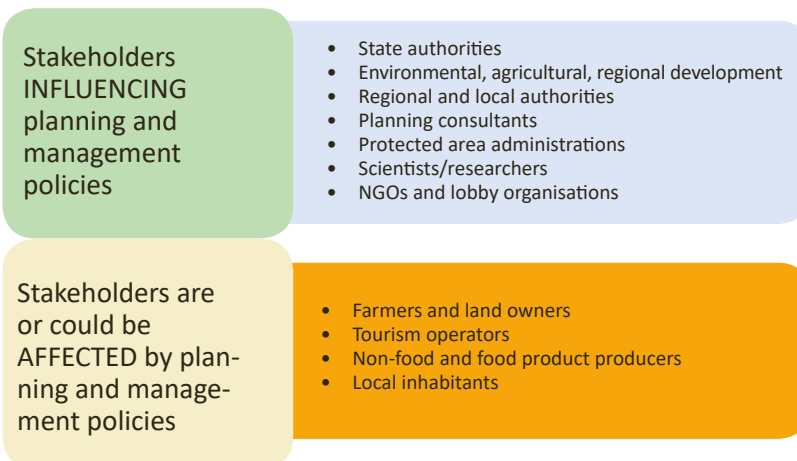
Figure 1. Viva Grass assessment framework



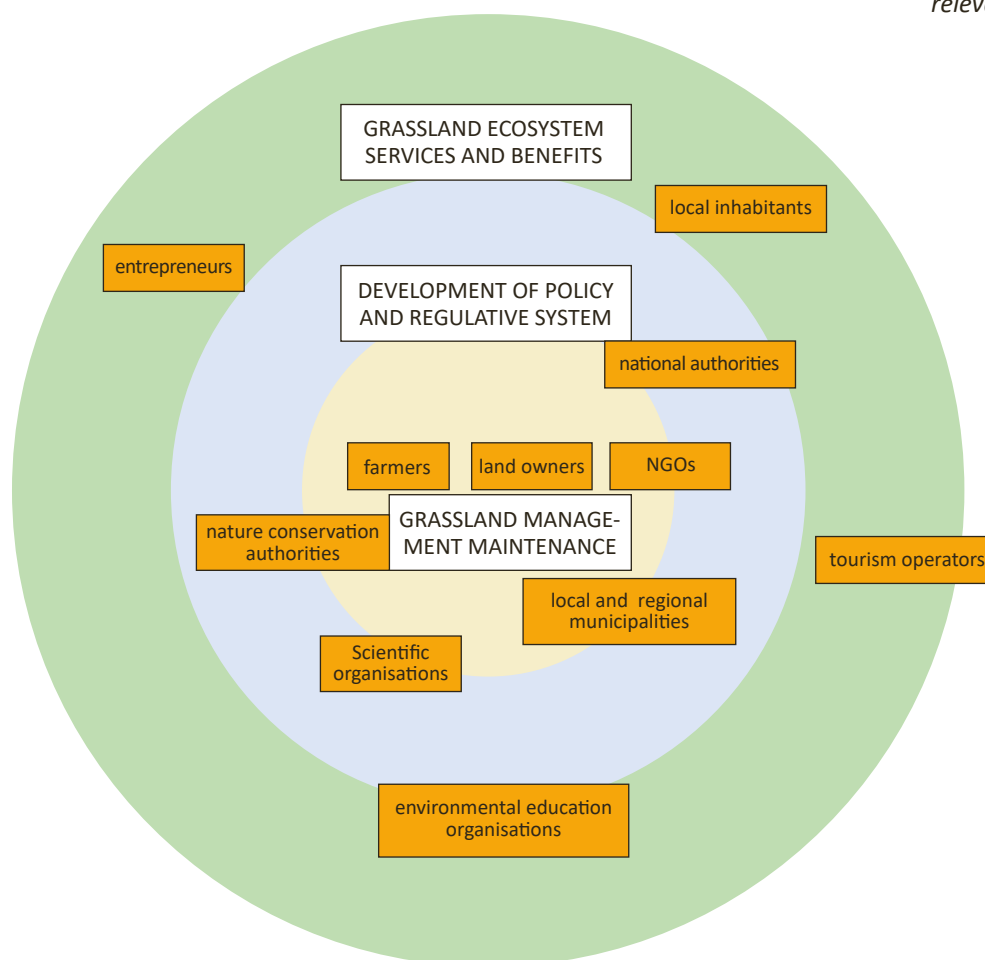
## 2. Stakeholders of the LIFE Viva Grass project

During the preparation of the LIFE Viva Grass project, initial stakeholder mapping was implemented to identify the key groups that influence the planning and management policies and grasslands, as well as those affected by the planning and land management policies (see Figure 2.1). The focus on planning and management policies was relevant as the project aimed to create the Integrated Planning Tool, which can support better decision-making and governance of grasslands in the long term.

The stakeholder mapping was further elaborated at the start of the project when a Stakeholder Involvement Strategy was prepared. The stakeholders were identified and characterised by their geographic location (country and demonstration case area), and by their relevance to grassland management. The project covers three Baltic States – Estonia, Latvia and Lithuania – and 9 demonstration areas at various administrative levels (Figure 2.3).



**Figure 2.1.** Initial stakeholder mapping relevant for the project scope



**Figure 2.2.** Stakeholder characterisation according to their roles in grassland management

During the course of implementation, the established project database contained more than 420 contact names from various organisational bodies that were more actively involved in the project activities.

The different roles in grassland management systems (maintaining grasslands, setting requirements and regulations, benefiting from grassland ecosystem services) were also mapped and characterised (see Figure 2.2).







Activities in „LIFE Viva Grass”  
case study areas



Notice board



Testing of the Tool



Bird guide



A watering facility for grazing animals



Report on assessment of grassland manage-  
ment in Lūmānda during the last 20 years



Mapping and assessment of ecosys-  
tem services by local stakeholders



Recommendations for further  
grassland maintenance



Restoration of grasslands



Round tables and  
stakeholder meetings



Visitor days

**Figure 2.3.** LIFE Viva Grass project case study areas



### 3. Approach and methods for stakeholder involvement

The degree of impacts or influences on policies and grassland management by the identified stakeholder groups is very diverse. Therefore, the project developed a Stakeholder Involvement Strategy which specified why (purpose), who (groups of actors), how (methods and activities) and when (in which action) to be involved in the project activities.

We distinguish three degrees of public participation: information supply, consultations and engagement (Figure 3.1). According to these, the corresponding methods and activities were planned and implemented. The first level of involvement is information supply aimed at providing and disseminating information about the grasslands, ecosystem services and related grassland management aspects through brochures, websites, notice boards, various events.

The second level of involvement is consultation. A number of actions require that draft analyses, publications and recommendations of the project shall be discussed with stakeholders. These papers were mainly consulted and feedback received from those who influence the planning and management policies or who also analyse and evaluate the policy implementation in the countries. Another important consultation was related to the Integrated Planning Tool development, where the project team

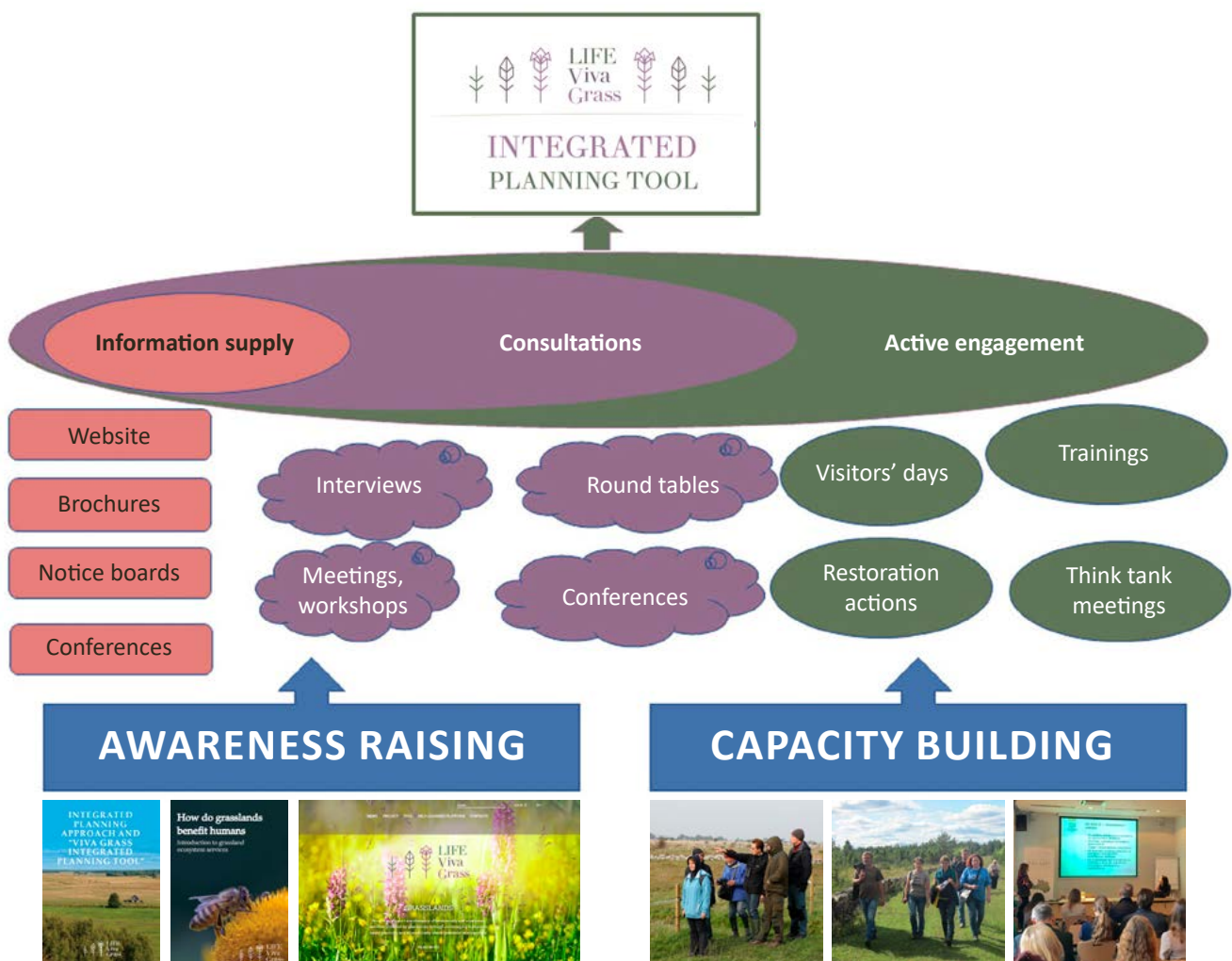


Figure 3.1. Methodology for stakeholder involvement in the LIFE Viva Grass activities





consulted with relevant stakeholders on data availability, the functional frame of the tool, modules, etc. A number of interviews and meetings were arranged with planners, farmers and grassland managers to collect local knowledge.

The third level of involvement was active and direct engagement in the project task implementation. Stakeholders involved were regional and local municipality specialists for spatial, development and rural development planning, nature conservation and protected area services in charge of semi-natural grassland management. The stakeholders mainly represented the case study areas and were actively engaged in the development of the Integrated Planning Tool. The landowners, farmers associations, tourism organisers, food and non-food product producers, companies and local NGOs represent the wider stakeholder groups which are affected by policies. They were involved through specific demonstration cases and public events such as visitor days.

### 3.1 Awareness raising

At the beginning of the project, the concept of ecosystem services was unknown for the project stakeholders as well as for a part of the project consortium. Therefore, leading project experts and scientists took great effort to provide the answers on emerging questions on ecosystem services, on semi-natural grasslands and their importance in providing benefits for the society and grassland management options, including restoration actions. The key focus was on how to present the concept of ecosystem services in a user-friendly way and how to embed the concept in different planning and management conditions. The LIFE Viva Grass project activities used all the abovementioned tools to provide information in conventional ways (brochures, websites) as well as through dialogue and interactive events. The project also experienced social learning processes through demonstration cases that worked closely with local people over a series of events that always integrated awareness raising components.



**Figure 3.2.** Key issues addressed by the LIFE Viva Grass project in relation to awareness raised and the development of the Integrated Planning Tool



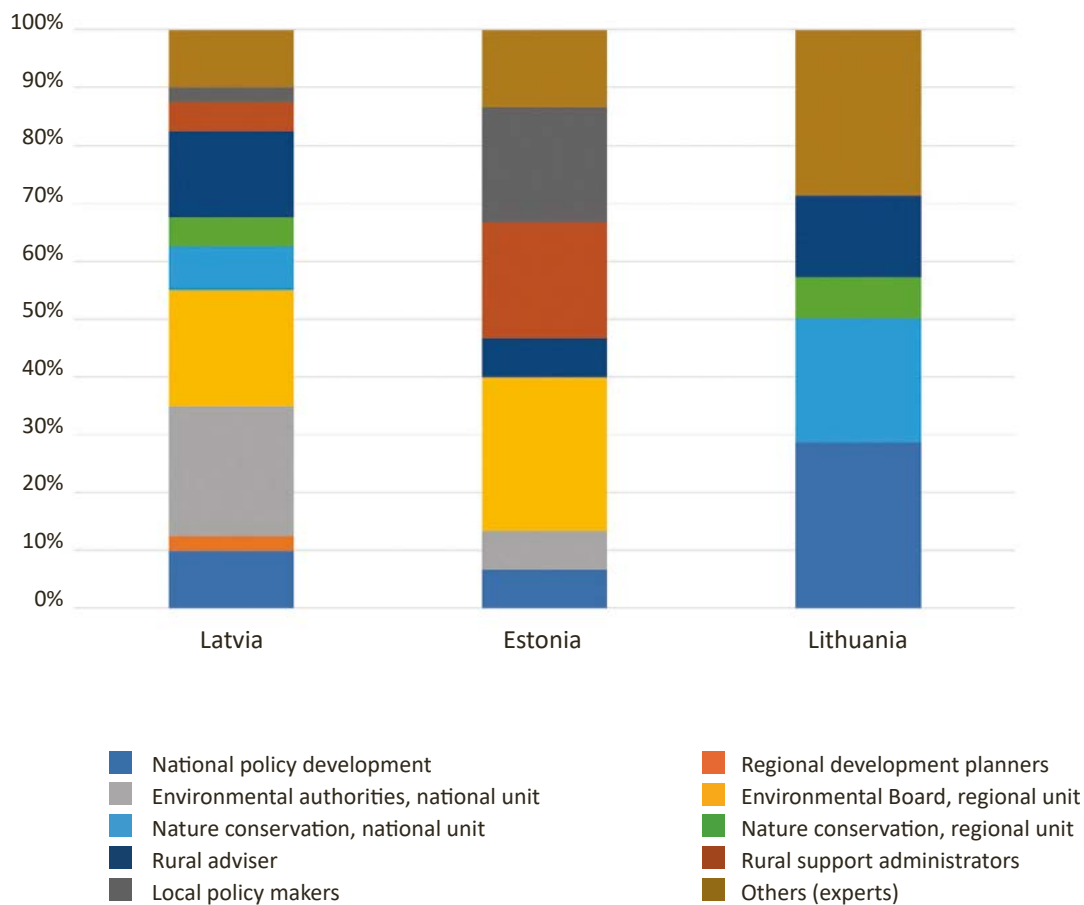
## 3.2. Social survey on awareness

In order to evaluate the stakeholder social awareness perceptions, knowledge of semi-natural grasslands and the willingness to be involved in the LIFE Viva Grass project activities, a comprehensive social survey was carried out in winter 2017-2018. At the beginning of the project (in 2015) a social study about the stakeholder perceptions on these aspects was implemented in Lümända parish, Saaremaa to evaluate the semi-natural grassland management experience over the last 20 years. Additionally, farmers and landowners were also interviewed about land management and threats of abandonment in the early stage of developing the Integrated Planning Tool. In this brochure, we present key findings from the social survey that addressed the public authorities, including municipalities and experts at local and regional level, farmers and landowners of the project areas. These two stakeholder groups were key target groups of the LIFE Viva Grass project and contacts were gathered through an established project database.

An online questionnaire was distributed concurrently in all three countries – December 2017-March 2018. The response rate varied between the countries and farmer groups. While farmers from Estonia (particularly Saaremaa) were most active, in Latvia the public authorities were more active. The number of responses correlates to some extent the focus of the project work and the number of people working in the field. For example, the Latvian project team worked most closely with municipalities and public authorities therefore their response rate was higher. In general, farmers were passive in responding to an online questionnaire, whereas they were more open to having direct conversations.

The respondents from the group “public authorities” represent various stakeholders targeted by the project (Figure 3.3) More than 90% hold a university degree, 65% were female representatives and 35% males; the average age of respondents – 42 years.

The main findings of the survey are presented in chapter 6.



**Figure 3.3.** The characteristics of the respondents from authorities



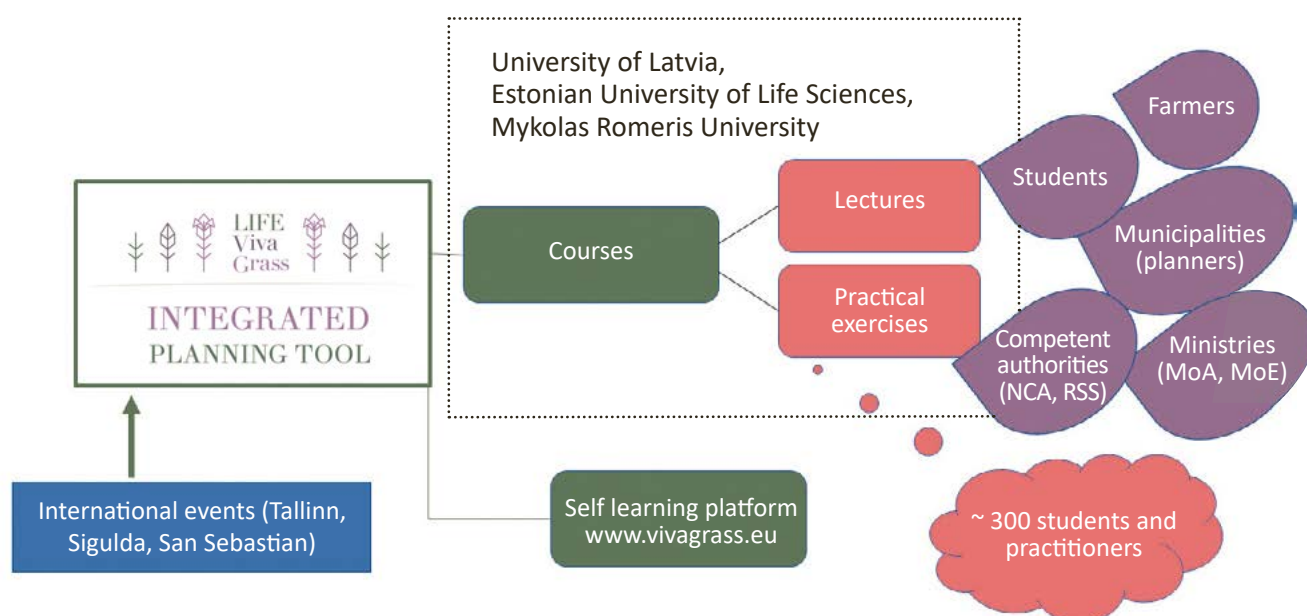


### 3.3. Capacity building

One of the LIFE Viva Grass project aims was to increase the knowledge and skills of the experienced and prospective planners to apply the Integrated Planning Tool for long-term management of the grasslands at different planning scales and perspectives. As the project was built on a new concept, the new courses were rolled out at the universities and training sessions targeted towards practitioners were arranged in four regions of Latvia and in cooperation with other organisations in Estonia and Lithuania. The courses were organised in autumn/winter 2018-2019 and more than 300 students and practitioners participated. One of the fundamental aspects of the courses was the concept of the ecosystem services and factors determining ecosystem services supply, methods for mapping and assessing ecosystem services and application of the ecosystem service concept in different planning contexts.

The attendees of the courses were asked to fill in the feedback questionnaire. The feedback on the importance of the theme of ecosystem services was recognised as important or very important for all groups of stakeholders in the three countries. The theme is relevant or will become very relevant in future for their work and it is quite possible that such an approach could be integrated in the spatial or other land or nature management planning tasks.

During the courses the groups were split according to their GIS skills. In general, it was stated that the Viva Grass Viewer module is relatively simple and easy to understand. This can be used as background information for making strategic assessments of the areas. Participants with GIS skills commented that there is a need for longer training and exercise sessions for a better understanding about the opportunities of the tool. The trainees appreciated the practical cases demonstrated during the session. Few active participants expressed willingness for an in-depth study on the tool. In addition to the direct courses, the project team has also developed the “self-learning” platform, which will ensure wider application of the tool in grassland management and land use planning, as well as recognition of the concept of the ecosystem services, values of grassland ecosystems and the applicability of the Integrated Planning Tool in the three countries and beyond.



**Figure 3.4.** Capacity building framework of the LIFE Viva Grass project

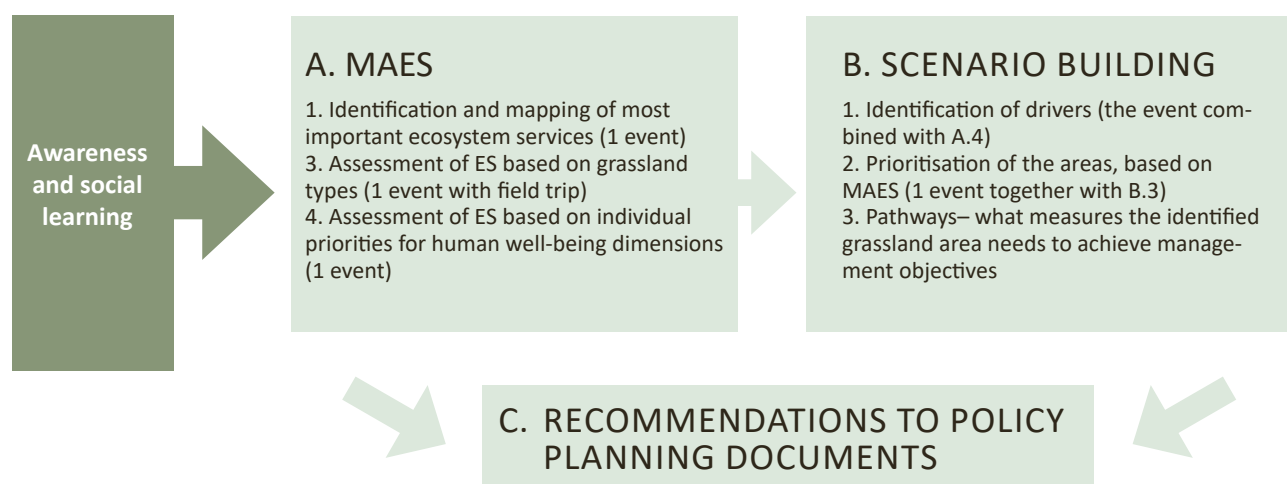


## 4. Participatory approach in development of solutions for grassland maintenance by operationalising the concept of ecosystem services

A broad spectrum of scientifically sound methods is more frequently applied to ensure better planning and informed decision-making for sustainable land use, including grassland management. Mapping and assessment of resources, including ecosystems and their supply of ecosystem services can be delivered through the use of biophysical, economic and social methods. While biophysical methods are mostly based on the use of empirical data and expert judgements, the economic and social methods strongly involve the contribution or participation of society either as individuals or groups. Involvement can take place either at a certain stage of the planning or decision-making process or infiltrate throughout the whole planning cycle. Through involvement people learn and thus increase awareness and create a better understanding of the challenging subject and potential solutions.

The LIFE Viva Grass project applied a variety of the methods to support grassland management in the Baltic States. In this chapter, we present how the participatory approach with a combination of several social methods was performed for increasing stakeholder awareness and literacy on the grasslands and ecosystem services they provide at local level. Madliena parish, a part of Ogre municipality, was a case study area for this purpose. A group of active local inhabitants/farmers (ca. 15 people) was established, which met several times during a series of workshops and site visits.

The work flow had the following main blocks (Figure 4.1): A) mapping and assessing of the ecosystem services (MAES); B) development of land use scenarios by identifying driving forces, prioritisation of the areas, pathways (measures) for achieving the set vision, C) recommendations for policy-makers and planners. The work was based on strong engagement of the local stakeholders from Madliena via a series of meetings and interactive discussions, study visits, outdoor experiences and exercises.



**Figure 4.1.** Testing the participatory approach at different stages of operationalising the concept of ecosystem services in sustainable grassland management planning in Madliena parish





## 4.1. Identification and selection of the most preferred ecosystem services

The first task for the participants was to acquaint themselves with the essentials of the ecosystem services' concept. The project team briefly informed participants in a systemic way on the ecosystems and their links to benefits for humans. Causal relationships between ecosystems, their functioning and conditions, human interventions on conditions of the ecosystem structures and determination of the ecosystem services were characterised in the context of the grasslands.

Having background information on three main categories of the ecosystem services (provisioning, regulating and cultural), the participants were encouraged to identify the grassland ecosystem services that are most important for them. For this task, a card technique was used: each participant was given three cards per category to identify which are the most important ones. They were then asked to present their cards and briefly explain their choice. The identified grassland ecosystem services were clustered and the most common ones were suggested for further work on spatial mapping.

**Table 4.1.** The most important ecosystem services by Madliena stakeholder group

Provisioning services	Regulating services	Cultural services
Fodder	Maintaining habitats for plant and animal nursery and reproduction	Outdoor recreation
Reared animals and their outputs (milk and meat)	Erosion control	Bird watching
Herbs for medicine (herbal teas)	Pollution remediation, retention	Cultural heritage
Honey	Flood control	Landscape beauty
Berries and mushrooms	Chemical condition of freshwaters	



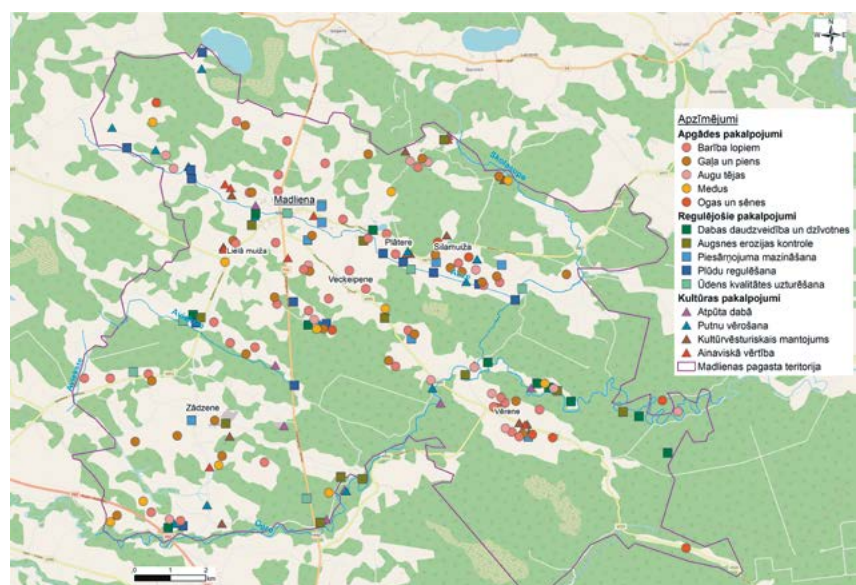
## 4.2. Mapping of ecosystem services

Based on the results of the identification of the most preferred ecosystem services, the participants were further engaged in the spatial mapping of the ES on the orthophoto map of Madliena municipality. We applied the “world café” method to allow each participant to contribute with their own local knowledge on the sites and areas supplying the ecosystem service. The participants were split randomly into three groups. Each group started mapping one category of grassland ecosystem services, followed by enriching the maps of two other categories of ecosystem services. Technically, the mapping was implemented by sticking coloured dots or drawing areas on the orthophoto map. The work was supported by the moderations of the project team. At the end of the session, a joint reflection session on the mapping results was conducted to reach overall agreement on the spatial distribution (Figure 4.2.1). In total, 100 sites were identified for provisioning services; 52 sites for regulating services and 44 sites for cultural services.

The created maps were later transferred into digital GIS maps and presented to the stakeholders in the subsequent meeting (Figure 4.2.2). When presenting all identified sites of the supply of ecosystem services in an aggregated map, specific grassland areas stood out with their multi-functionality. A maximum of seven or eight out of fourteen identified ecosystem services were perceived in a few grassland fields. It was evident that a majority of the participants were more knowledgeable about their closer



**Figure 4.2.1.** Mapping results of provisioning services by Madliena stakeholders



**Figure 4.2.2.** Transferred participatory GIS mapping results of provisioning services





vicinity or own farmstead. In summary, we performed the social method known as the participatory GIS that allows for the participation of various stakeholders in the creation of an ES map, by integrating their perceptions, knowledge and values in the final maps of ecosystem services.<sup>1</sup>

### 4.3. Assessing the ecosystem services

The grassland ecosystem is not uniform but represents a large variety which is determined by natural conditions, as well as human management practices. When raising awareness about the ecosystem services we also wanted to draw attention to these aspects. Therefore, the next task in the work on ecosystem services for Madliena stakeholders was to distinguish and assess the differences between key grassland types in their parish. The task was implemented in an interactive way by organising field visits to the six sites of the most typical grasslands followed by the assessment session at the end of the day.

The assessment of the ecosystem services covered the following grasslands: sown, cultivated grasslands used for sheep grazing, potential habitat of wooded meadows; wooded meadows (habitat code: 6530); dry grasslands on calcareous substrates (habitat code 6210); Molina meadows in calcareous, peaty



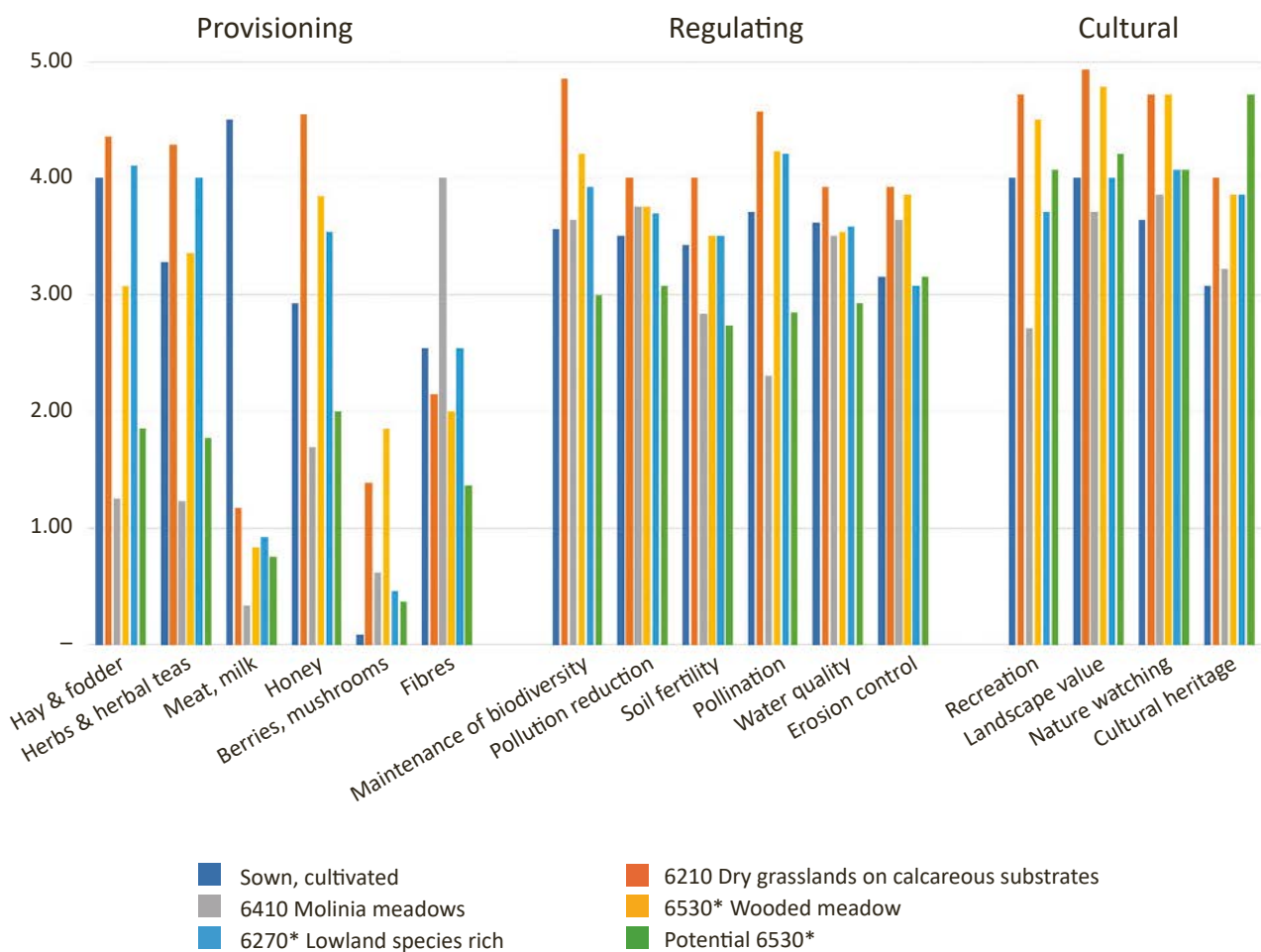
<sup>1</sup> Santos-Martín F. et al. (2018). Report on Social Mapping and Assessment methods Deliverable D3.1EU Horizon 2020 ES-MERALDA Project, Grant agreement No. 642007.



soils (habitat code 6410); fennoscandian lowland species-rich grasslands (habitat code 6270\*). For the assessment we used a lookup-table where participants were asked to assign their perceived values of ecosystem services supplied by a particular grassland type based on the information and observations gathered during the field visit of the day. The scores – 0 (no supply) to 5 (very high) were used to show the relative contributions of ecosystem services. Firstly, the participants assigned individual scores, then the process was moderated to achieve a consensus score of the group in open discourse.

This deliberate assessment method also promoted social learning about the local grasslands and their multi-functionality in providing benefits. Process wise, the method mirrors the well-known look-up table or matrix that is filled in by experts based on the available knowledge and information. The later approach was also used for providing ecosystem service values in the Viva Grass Integrated Planning Tool.

The perceived values of ecosystem services reveal that the high provision services supply can be ensured not only by cultivated sown grasslands where maintenance is ensured by grazing, but also by a quite specific habitat - dry grasslands on calcareous substrates - which are multifunctional and whose maintenance and high value is ensured by extensive management. This grassland management practice also ensures high biodiversity maintenance as well as scenic values. The participants also recognised the high recreational value of wooded meadows, which are relatively rare in Latvia, most frequently found in the vicinity of manor houses.



**Figure 4.3.** Perceived values of the ecosystem services by the Madliena stakeholders





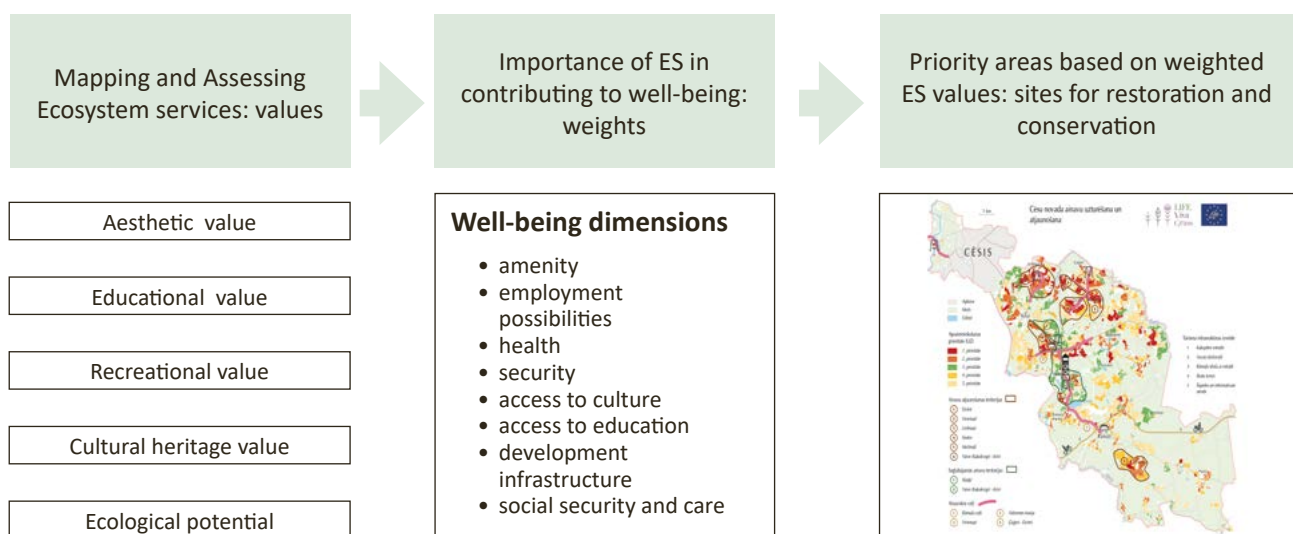
# 5. Integration of ecosystem services and well-being aspects in land use and landscape policy development

Well-being is an important aspect of consideration for development and spatial planners, politicians and society on the whole. People strive to improve their living standards including better jobs and income, social and cultural conditions and amenities. To satisfy the growing needs and demands for well-being, people exploit natural resources, shape landscapes and ecosystems, including grasslands. In turn, this leads to change in ecosystem conditions and ecosystem services (see Figure 1). The direction and intensity or limitations of the use and maintenance of the land and resources is defined through spatial or specific planning processes. Nowadays, multiple criteria and trade-off analyses are applied in the planning and decision-making about the best development or management scenarios for the relevant planning level. The process can be led by professionals and experts as well as by strong participatory elements or community-based approaches.

In the LIFE Viva Grass project, two municipal planning cases – Cēsis and Madliena - were implemented in strong collaboration between professionals, experts and community representatives concerned about local landscapes, nature and cultural issues. In chapter 4, we illustrated the participatory approach in mapping and assessing ecosystem services. In this chapter, we present an evaluation of the importance of the ecosystem services in relation to the main defined well-being dimensions and in the context of grassland and landscape management in two demonstration areas. In this way we aimed to capture a broader spectrum of societal benefits provided by grasslands and related ecosystem services.

## 5.1. Cēsis municipality and landscapes management planning

Five groups of ecosystem services were identified as important factors for prioritising the management areas in municipal landscape management planning. These were four cultural services (recreational, educational, cultural heritage and aesthetic) and ecological value (based on the ecosystem services forming the habitats bundle – herbs for medicine, maintaining habitats, global climate regulation, pollination and seed dispersal). The mapping and assessment of the ecosystem services based on bio-physical character-



**Figure 5.1.** Importance of the ecosystem services relevant for landscape planning in Cēsis municipality



istics and indicators were carried out by the project experts during the development of the Viva Grass Integrated Planning Tool. In the next step, stakeholder engagement was organised by forming a group of approximately 15 people (spatial planners and tourism experts from the municipality, farmers and local entrepreneurs), who attributed their individually perceived importance of the ecosystem services in relation to the contribution of the ecosystem services to each of the well-being dimensions (defined by Cēsis municipality's Sustainable Development Strategy 2014 - 2030 aimed at ensuring a high quality of life for local people). The obtained average or importance of the five ecosystem services (determined by their contribution to the well-being dimension) were applied as weights to determine the priority areas for landscape management activities. It turned out that the highest average relative value was assigned to the aesthetics of a landscape and the bundle of ecological value of ecosystem services – 4 out of 5, the lowest was for educational ES – 2 out of 5 (Figure 5.1). The average weighted values of the importance of the ecosystem services were well received by the Cēsis stakeholder group and used in the next step of planning - to define the priority areas for landscape management actions by using the prioritisation model of the Viva Grass Integrated Planning Tool.

The results of the LIFE Viva Grass project's case study were used to develop recommendations on landscape management areas for Cēsis municipality's Development Programme and the related action plan. The latter documents – programme and the action plan - are currently the most relevant mid-term municipal planning documents at local level in Latvia to ensure sustainability of landscapes, including grasslands.

## 5.2. Madliena parish and the relative importance of ES for the well-being of the local community

A slightly different approach in linking ecosystem services with well-being categories was applied in Madliena parish. In contrast with the Cēsis case study, the mapping and assessment of ecosystem services for Madliena parish were implemented by a group of local people in a series of meetings (see chapter 4). In the next step, following the ES identification, mapping and assessment in relation to grassland





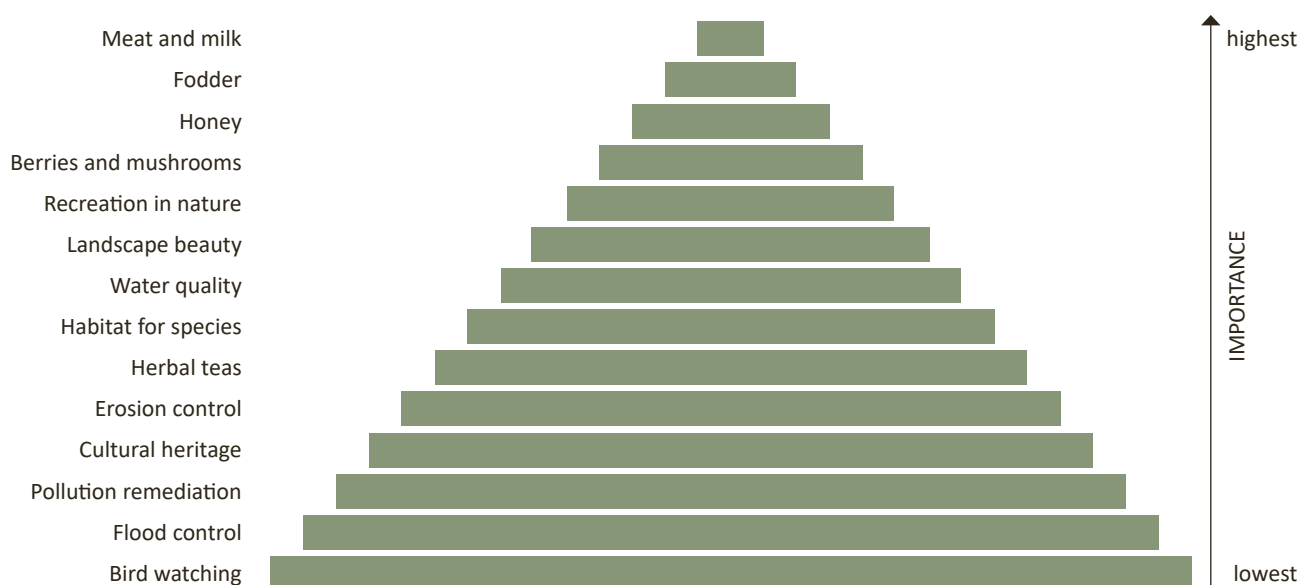
types, the participants were asked to evaluate the ES from the perspective of well-being dimensions. It was important that people were aware not only about grasslands, the conditions and benefits that they deliver in terms of ecosystem services, but to extend the perception on the ecosystems with encouraging recognition of their contribution to the well-being of the community. In this way, the perceived values of grasslands and delivery of the ecosystem services were enhanced.

Firstly, the participants individually matched the type of ecosystem services with key well-being dimensions: income, employment, food and other products, life quality & health; amenities and intrinsic value of nature. The outcome of this exercise was a matrix showing the perceived links between ecosystem services and benefits for the well-being of Madliena community. According to the view of the local group all identified ecosystem services contribute towards the well-being of Madliena, at least in one of six dimensions.

Secondly, the participants set the values on the importance of the corresponding ecosystem services by appraising their contribution to the matched well-being dimensions. Thus, the matrix was enriched by the relative values of each ecosystem service in the context of well-being. The average values of individual evaluations of the ecosystem services were used to derive the final ranking of importance of the ecosystem services towards well-being dimensions (see figure 5.2).

The well-being of the community is influenced by multiple drivers and factors influencing the grassland capacity to deliver the ecosystem services and benefits received by the local community. Recognition of them is also a very important element in a successful development and spatial planning process. During the LIFE Viva Grass project activities, together with the Madliena community we explored the key market (economic), policy (plans and strategies), social and demographic as well as science and technology drivers having an impact on grassland (land-use) management at local as well as at national scale. This part of collaboration provided the opportunity to discuss the key barriers for maintaining semi-natural grasslands at local level.

Similarly, to the Cēsis case, the outcomes of the work of the local community group were used to develop recommendations for grassland management to be integrated in the municipal planning documents, in this case for Ogre municipality where Madliena parish forms a significant part.



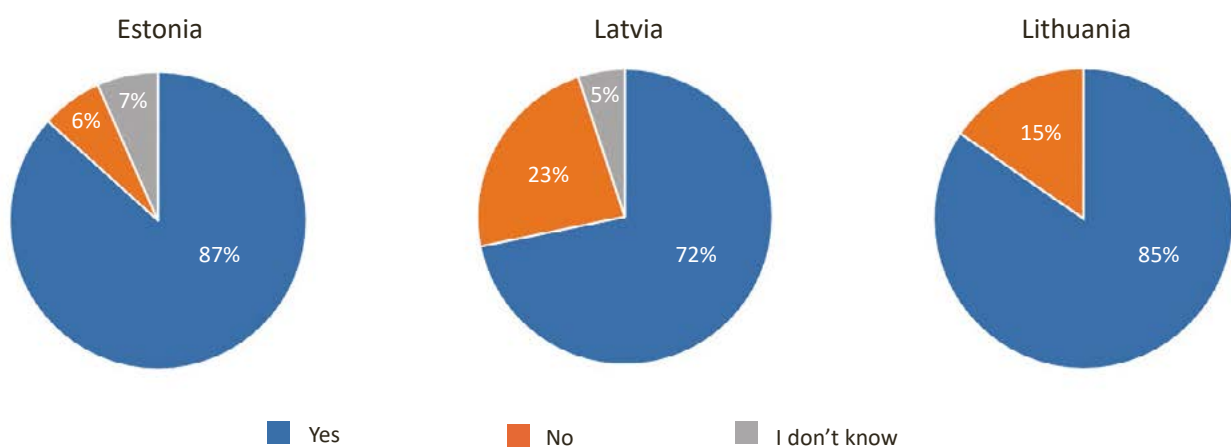
**Figure 5.2.** Hierarchy of the importance of the ES in the well-being of Madliena local community: the top ES means highest relative importance



# 6. Knowledge and perceptions about the semi-natural grasslands

## 6.1. Importance of semi-natural grasslands

In the Baltic States grasslands require regular management activities by farmers and landowners. Whereas cultivated (sown) and permanent (perennial) grasslands that most often provide fodder for cattle or other biomass related products (including for energy production) are well managed by farmers, the situation is different with semi-natural grasslands that are not used intensively. Abandoned grasslands without human intervention undergo natural succession processes - gradual afforestation, thus biodiversity - habitats and species - is lost. Therefore, it is important to inform people about the importance of the semi-natural grassland management. The survey carried out during the LIFE Viva Grass project showed that respondents from all three countries (farmers and authorities) are familiar with the term “semi-natural” (also defined as biologically valuable) grasslands and the respondents believe that this type of grassland requires management. A majority of the approached farmers and public authorities has recognised that semi-natural grasslands require special and different management measures compared to intensive cultivated grasslands (Figure 6.1).

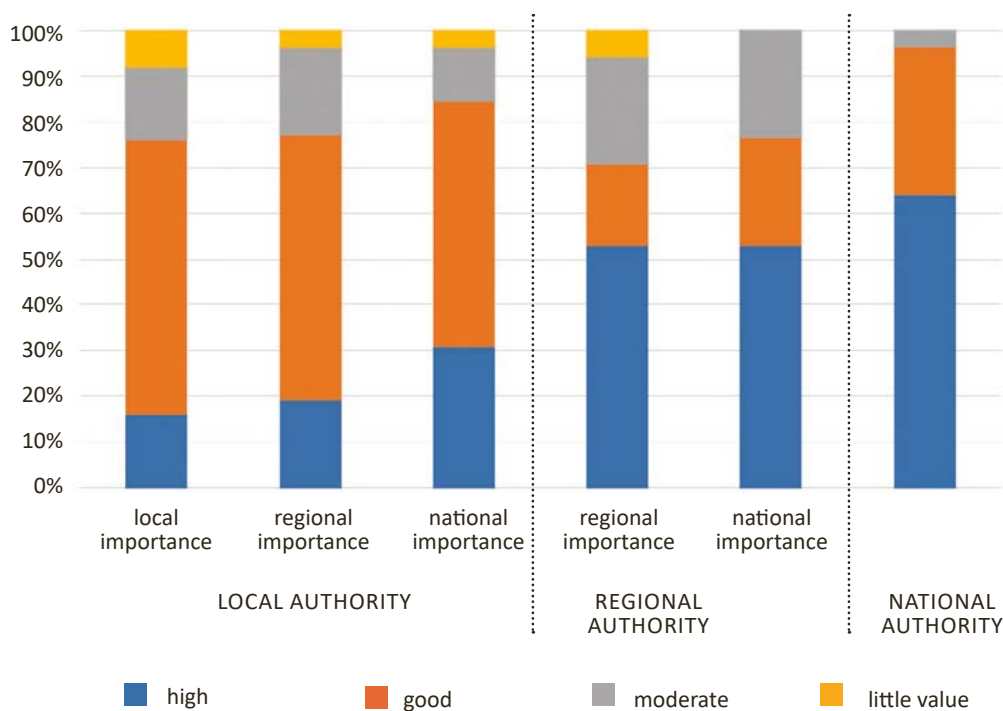


**Figure 6.1.** Response of authority representatives to the question:  
*Do you think that semi-natural grasslands need special & different management measures?*

Having habitats of EU importance is recognised as the key characteristics of semi-natural grasslands. The majority of the respondents are also aware that the presence of protected plant and bird species is another characteristic of the semi-natural grasslands. When asked whether semi-natural grasslands are located within or outside protected areas, the opinion of respondents is split, however a majority of the respondents perceive that the semi-natural grasslands are found in protected areas. Actual spatial distribution of the semi-natural grasslands is different – a large share of them are located outside the nature protected areas, thus having less attention from conservation agencies.

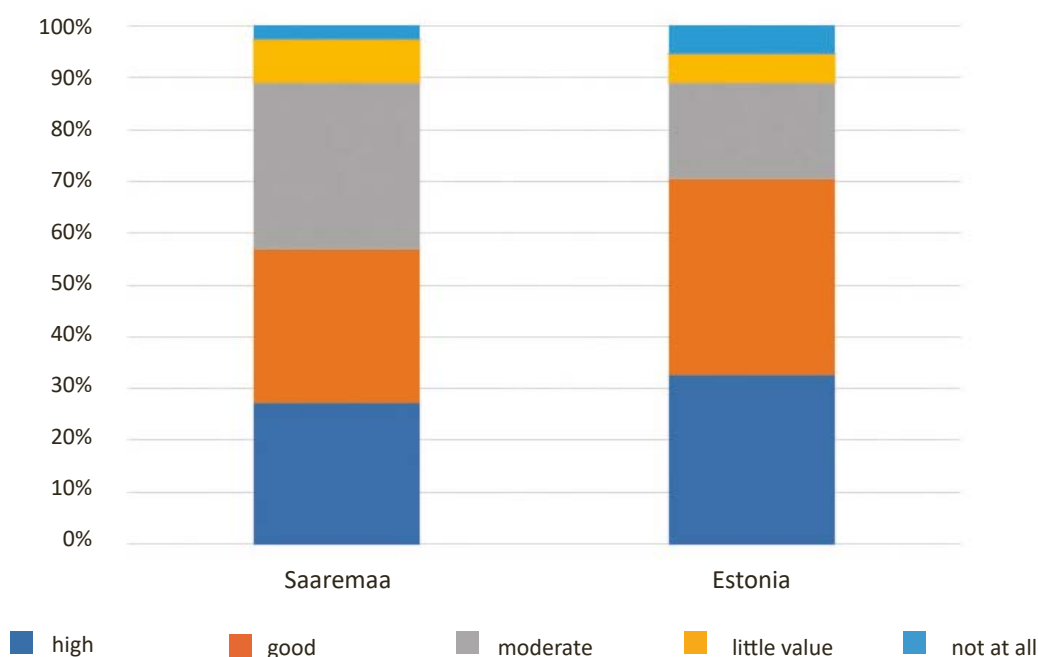
During the implementation of the LIFE Viva Grass project, the biological, economic and social values and benefits of semi-natural grasslands were particularly highlighted by the project team. This is also recognised by the authorities and farmers from the project areas. Moreover, both stakeholder groups of the LIFE Viva Grass project distinguish the importance of semi-natural grasslands at local, regional or national level. Grasslands do have a higher importance for the country compared to the region or local municipality where the respondent works (Figure 6.2).





**Figure 6.2.** Response by public authorities from the Baltic States to the question: *Do you consider that the semi-natural grasslands have a special value at particular planning level?*

It is inspiring to discover the high valuation of semi-natural grasslands by farmers – less than 5% do not see any or little value from this ecosystem (Figure 6.3). Similarly to the Baltic public authorities, the importance of semi-natural grasslands is higher for Estonia as the country than for the local community, in Saaremaa.



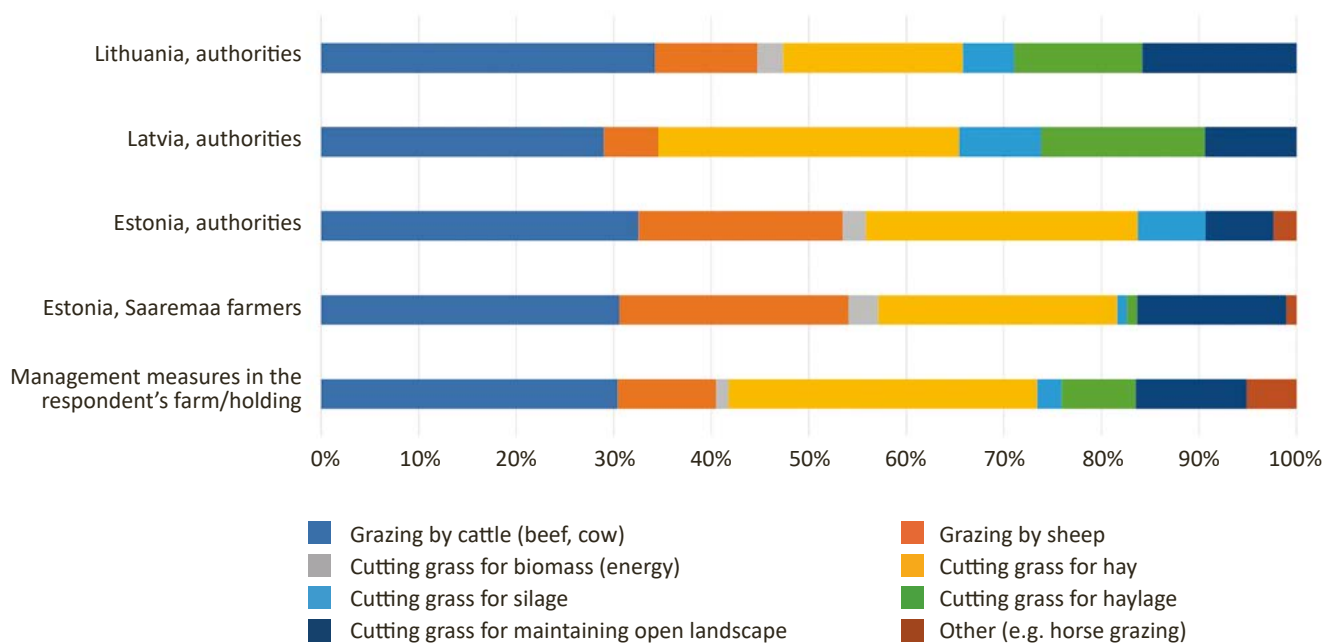
**Figure 6.3.** Response by farmers from Saaremaa (project area) on the question: *Do you consider that the semi-natural grasslands have a special value?*





## 6.2. Grassland management practices

In order to maintain semi-natural grasslands farmers shall mainly carry out grazing or mowing of areas, as well some soil enrichment, if needed. Intensity of grazing and a mowing schedule depend on the type of the grasslands as well as the status of the grassland. The most common grassland management activities carried out in the Baltics are cattle grazing and cutting grass for hay. It is important to realise that every fourth farmer (approx. 25%) who responded to the survey also manage grasslands with the intention of maintaining open landscapes. The reason to maintain grasslands as an important component of rural landscapes is also perceived by the public authorities of the three countries.



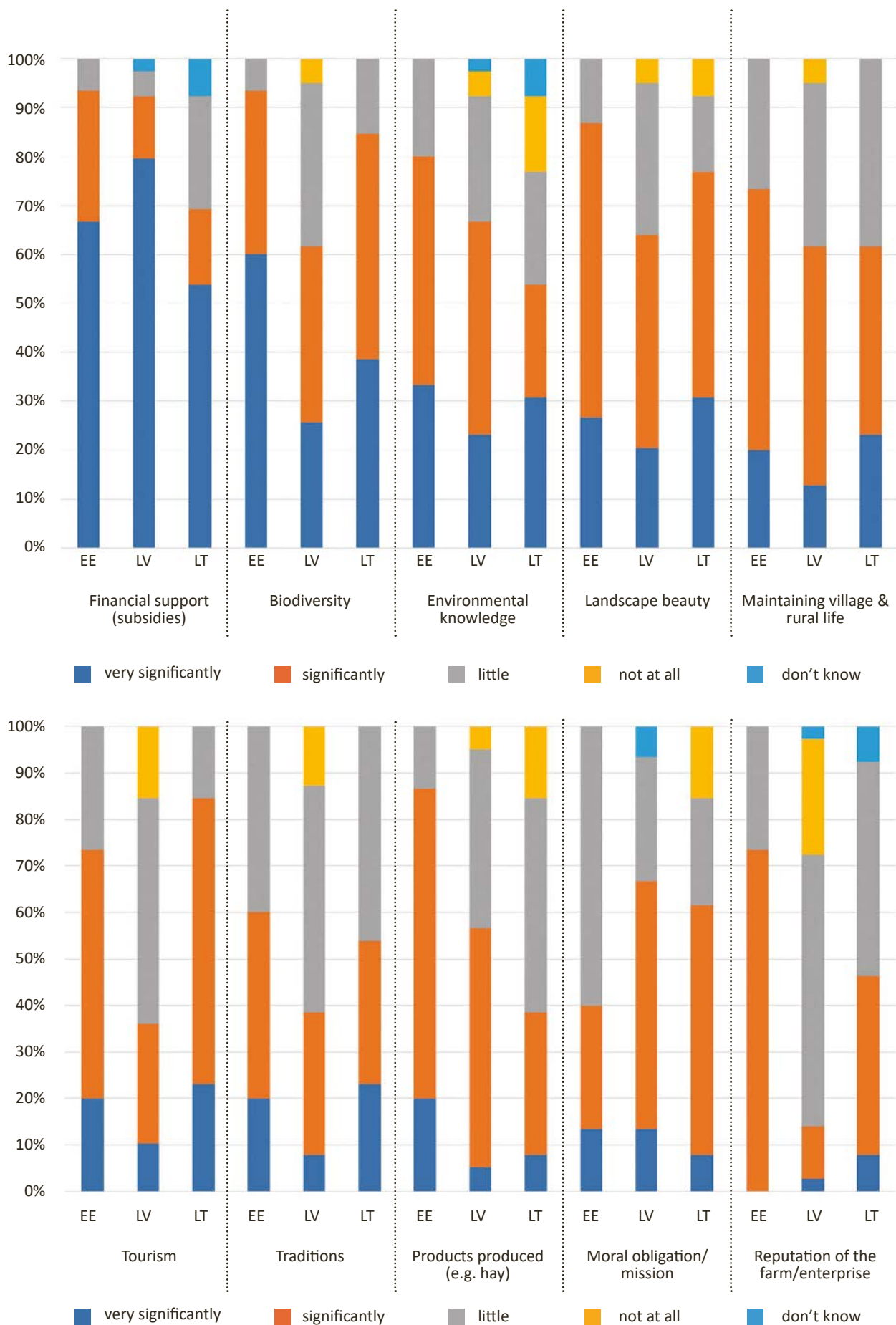
**Figure 6.4.** Responses to the question: What are the most common grassland management measures implemented by farmers or landowners in your country?

## 6.3. Obstacles and incentives for grassland management

There are multiple factors that impact upon grassland management. Natural conditions (soil and climate) are the key preconditions for land use, but not the only ones. Being in the EU, Baltic farmers and landowners are affected by different policies and regulations that can be seen as a barrier or stimulus to perform the management of semi-natural or any grassland. Similarly to other EU Member States, Baltic farmers receive direct payments for agricultural activities. Additionally, farmers can commit to implementing voluntary or so-called agri-environmental measures to maintain semi-natural or grasslands with a high biodiversity value, or for management of habitats of Community importance. There are only a few farmers who responded to the LIFE Viva Grass survey who do not apply for subsidies for managing the semi-natural grasslands.

The perception about the key stimulating factors is comparatively similar between the Baltic authorities. Financial support in the form of subsidies to the farmers is recognised as the most significant incentive for supporting management of semi-natural grasslands. It is assuring to observe that biodiversity, landscape beauty as well as environmental knowledge are also recognised as important motivational factors for maintaining semi-natural grasslands.

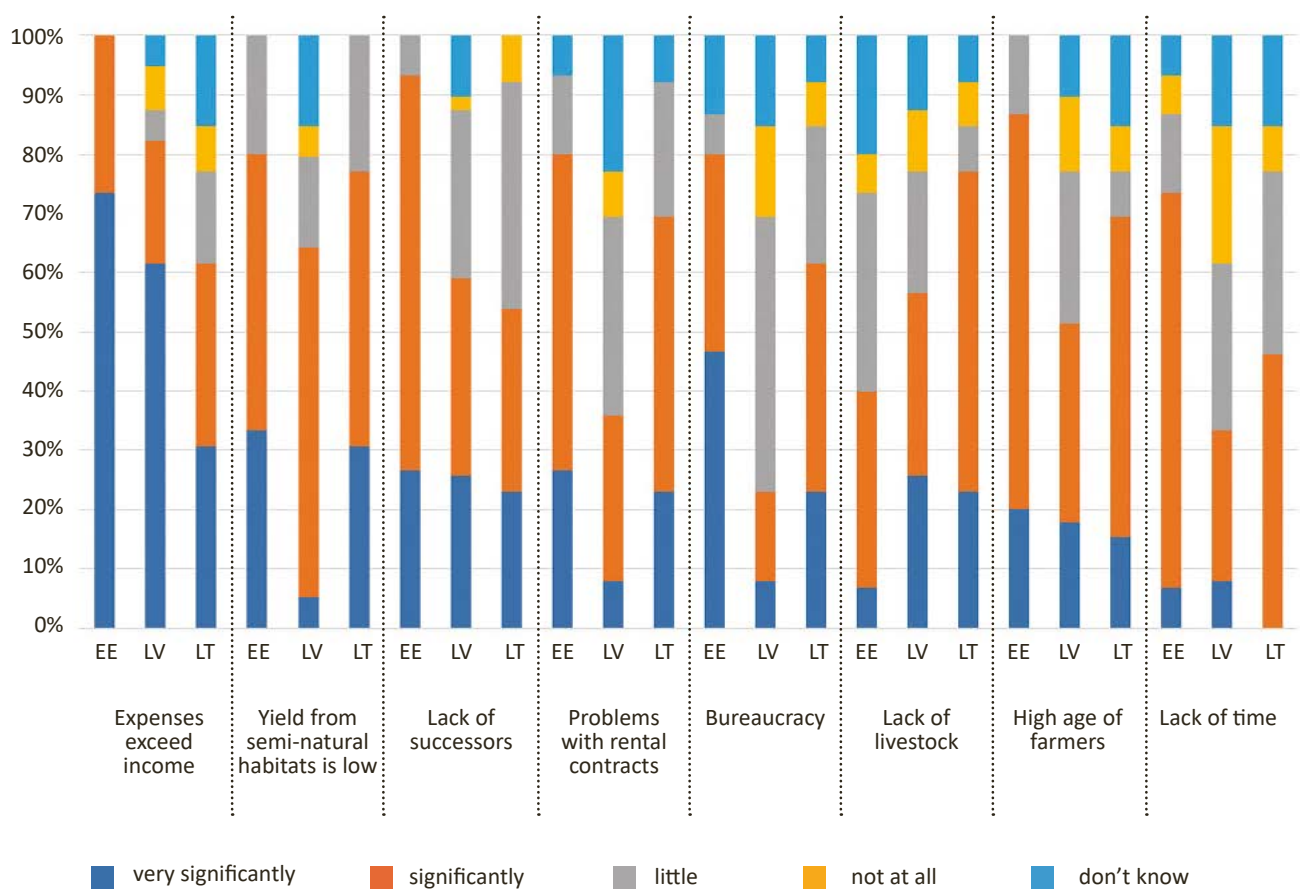




**Figure 6.5.** Stimulating factors to manage semi-natural habitats, respondents from authorities



Participants of the survey were also asked to evaluate the obstacles in grassland management, although here the main factor impacting on the management of the semi-natural grasslands is that the expenses exceed the income generated. With regard to other barriers, the view of respondents from the authorities Estonia, Latvia and Lithuania differs. For Estonia, management of semi-natural grassland is very significantly impacted upon by bureaucracy. It is important to recognise the ageing of the farmers and lack of successors to manage the abandoned land. The Estonian farmers who responded to the survey also assessed the hampering factors. They are most significantly impacted by the expenses being higher than income, which is related to the low yields from the semi-natural grasslands. Lithuanian authorities observe a significant impact of the lack of successors in farms and the related practice of signing rental contracts. Latvian authorities have identified that livestock is not having significant enough impact on semi-grassland management.

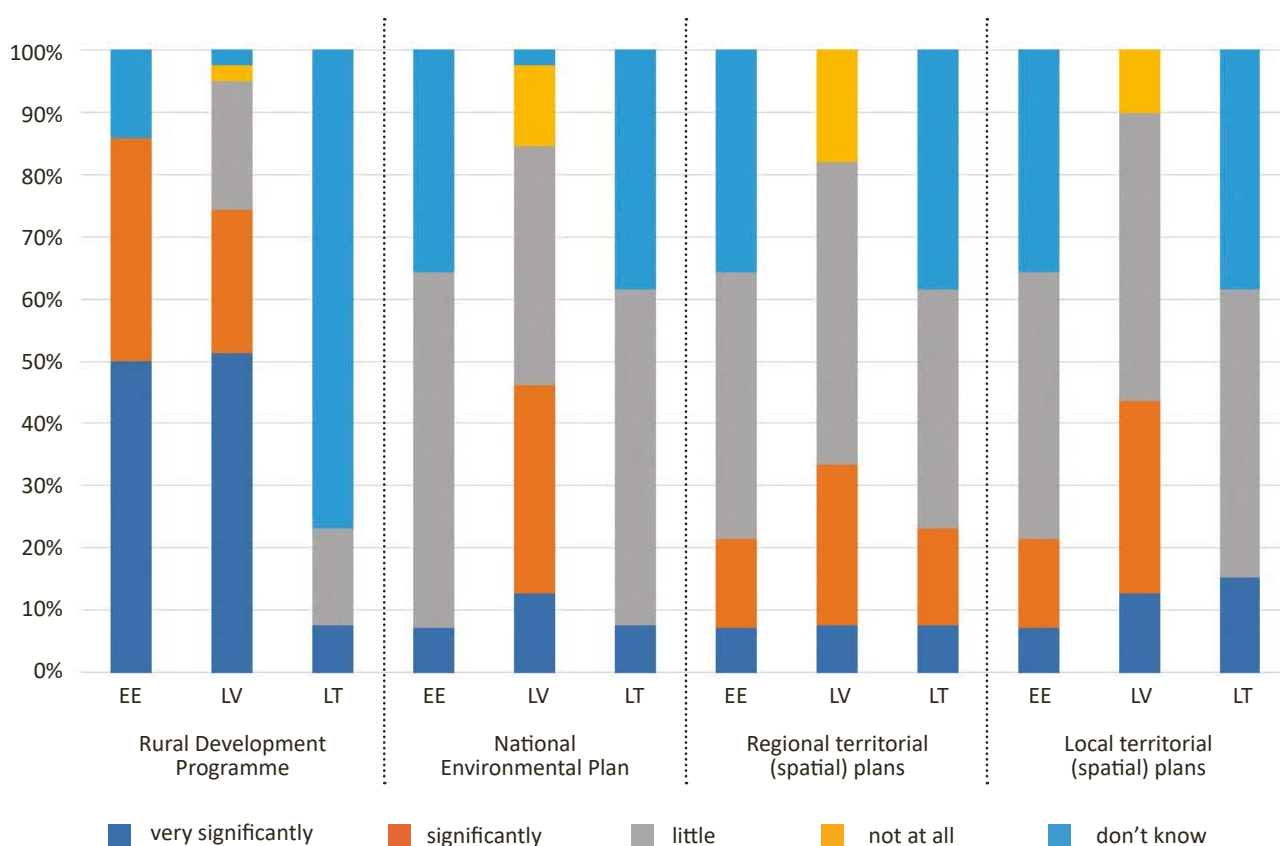


**Figure 6.6.** Factors hampering the management of semi-natural habitats, respondents from authorities

As the LIFE Viva Grass project aims at supporting planning for better grassland management, it was important to ask survey participants to reflect on the role of the key planning documents on the management of grasslands. It is evident that Rural Development Programme is the key policy document that more than half of the respondents see as very significant (Figure 6.7).







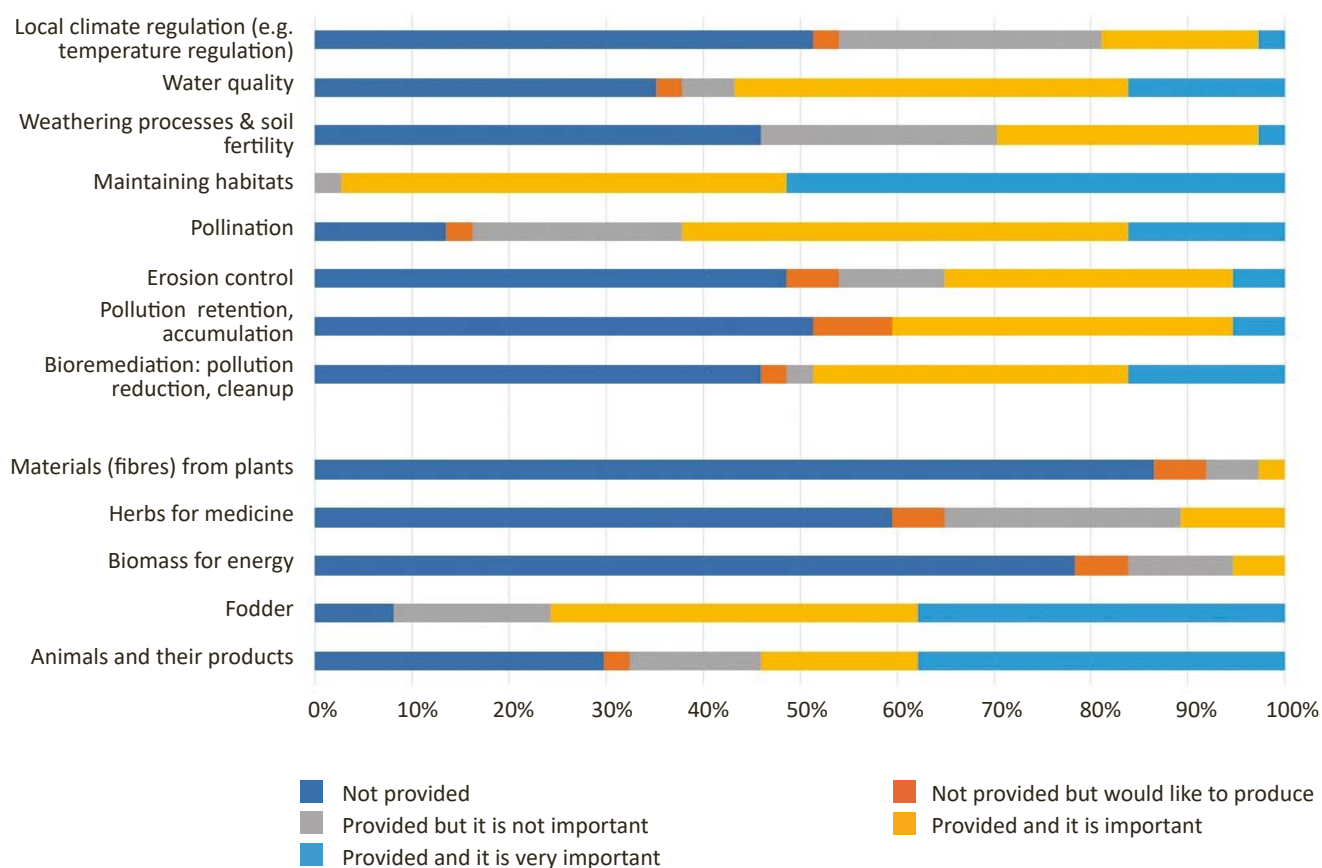
**Figure 6.7.** Impact of planning documents on grassland management; respondents from authorities

## 6.4. Perceived values of grassland ecosystem services

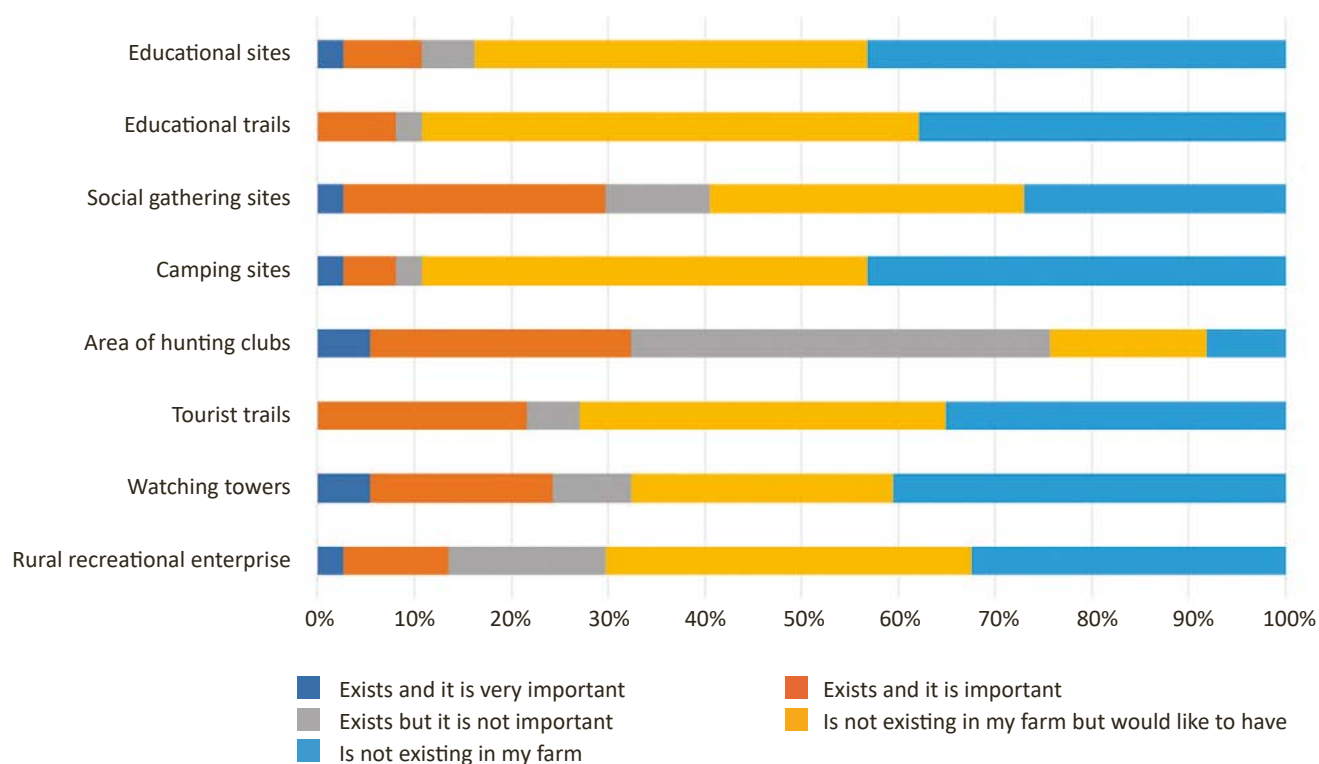
One of the issues of the social survey was dedicated to the assessment of the grassland ecosystem services. We asked farmers to assess the supply of provisioning and regulating services of the grasslands of their farm or land. The responses in Figure 6.8 reveal the structure of grassland use in Saaremaa: the land is mainly used to ensure livestock farming. With regard to the cultural services, we explored the existence of different essential elements to supply particular ecosystem services (Figure 6.9). A majority of farmers gave high or good scores for having the objects and infrastructure that provide cultural services and only a few see them as an obstacle in their farming practices.

Public authorities were asked to assess the ecosystem services of the three main categories of the grasslands: sown (cultivated) grasslands, permanent grasslands and semi-natural grasslands. These classification categories were also used in the Viva Grass planning tool and ecosystem services' assessment. The responses (Figure 6.10) indicate the prevailing perceptions - semi-natural grasslands are slightly less important in providing fodder, while more beneficial for collecting herbs. Figure 6.10. also shows that it is not as common in the Baltics to use fibres and other materials from plants. With regard to people's perception of the regulating services, semi-natural grasslands are outstanding in providing pollination services as well as maintenance of the habitats. Respondents are less aware about the contribution of grasslands in the weathering processes and local climate regulations (Figure 6.11).



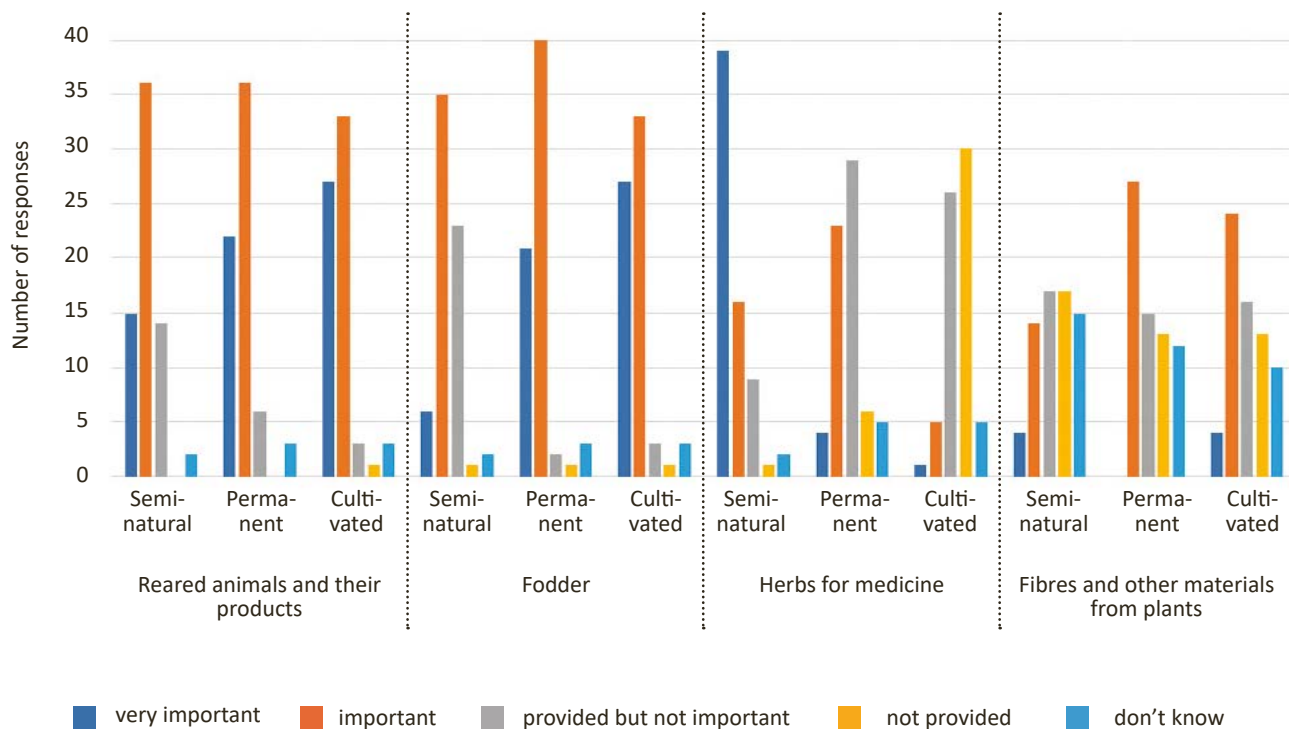


**Figure 6.8.** Importance of the grassland ecosystem services (provisioning and regulating) by respondents (farmers of Saaremaa)

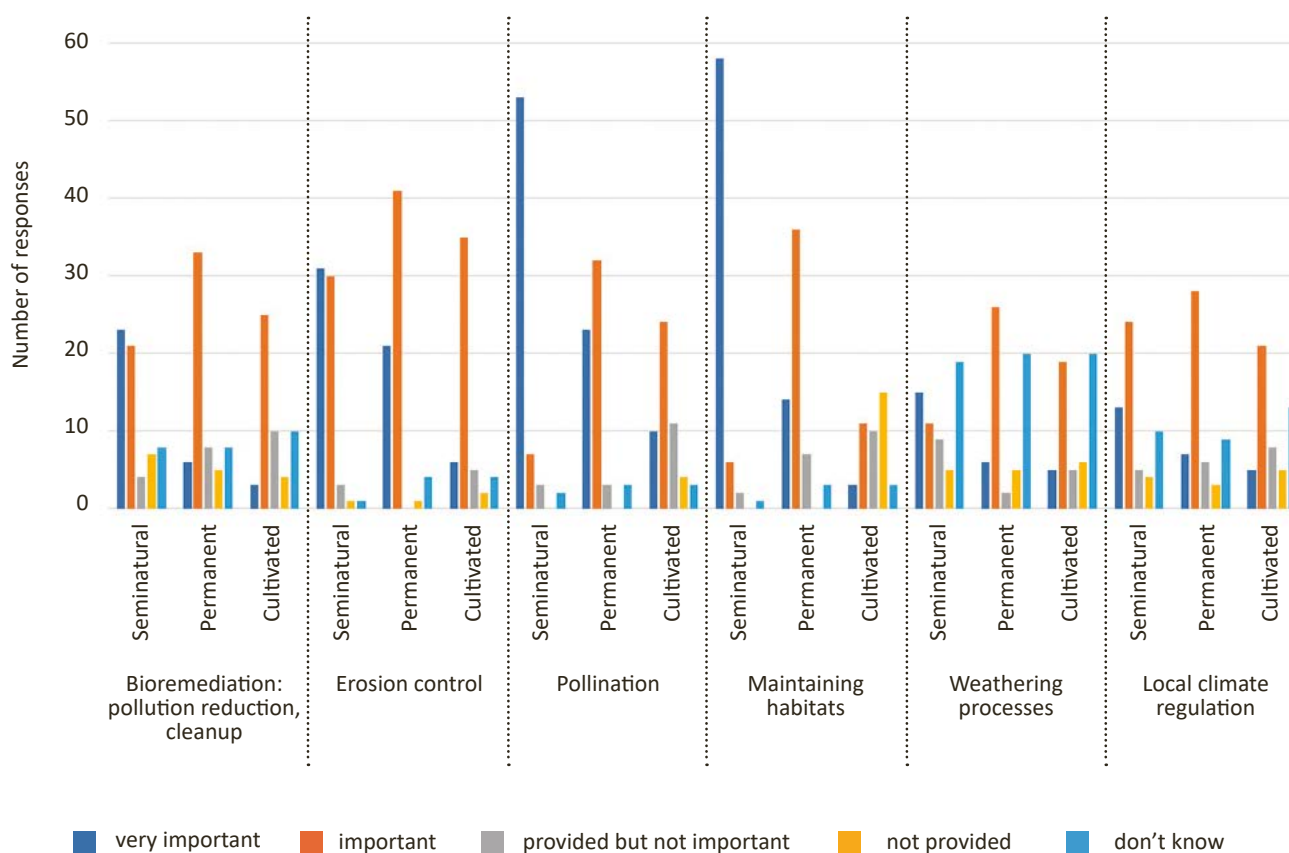


**Figure 6.9.** Provisioning of the cultural ecosystem services by respondents (farmers of Saaremaa)





**Figure 6.10.** Perceived contribution of the provisioning ecosystem services supply per grassland category (public authorities)



**Figure 6.11.** Perceived contribution of the regulating ecosystem services supply per grassland category (public authorities)





## 7. Awareness raising on ecosystem services in public events

The LIFE Viva Grass project organised open public or visitors' days at the project areas to draw attention to the grassland management issues as well as ecosystem services. A range of tools were used to talk, to present and interact with attendants of these events. Below is an overview on the most prominent events:

### Visitor days in Kurese farm

Kurese nature farm lies in the landscape protection area which belongs to Natura 2000 network and was established for the protection of priority habitats such as alvars and rare species. 14 of 37 Estonian orchid species grow on the lands of Kurese farm. Also, internationally protected bird species nest on Kurese farm lands.

During the annual visitor days, attendants received information about the values of the area as well as about the challenges of maintaining the habitat at a good conservation status. The installed notice board provides information to visitors about the area and its nature, cultural and other assets.



### Šilutė bird watching days

A bird migratory route crosses the area of Šilutė municipality that is located in Nemunas delta. Hundreds of bird species are found here and thousands of geese can be observed in the meadows in spring. This is a breeding area for a few globally endangered bird species (e.g. Aquatic Warbler, Great Snipe etc.) creating the potential to attract ornithologists worldwide. This biodiversity phenomenon attracts people to the region, particularly during the migratory season. During the season, the project team organised visitor days to inform about the area, the importance of maintaining the grasslands as a resource for nature tourism, and the concept of the ecosystem services of grass-

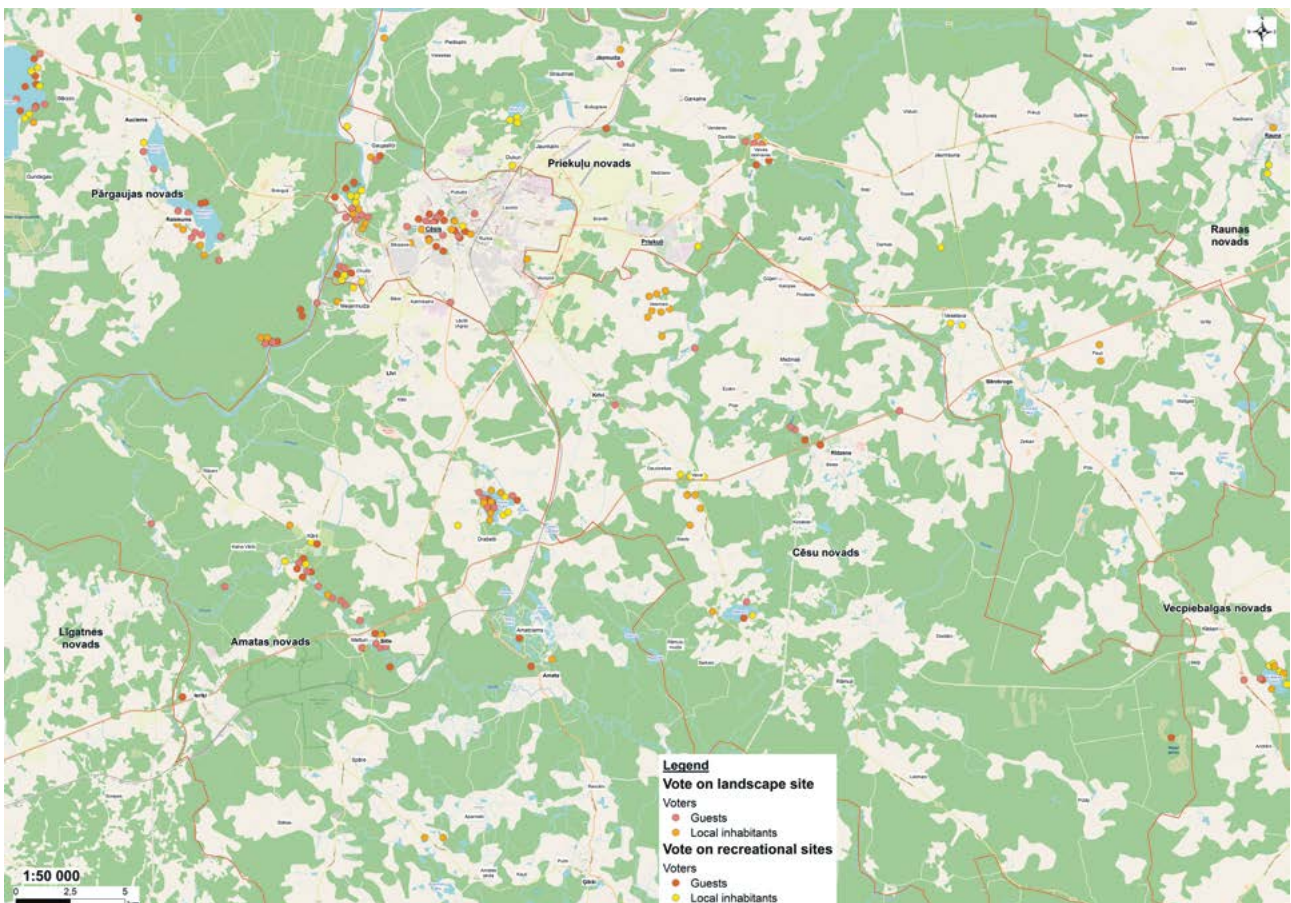




lands. A simple interactive quiz was played – asking people to identify and cluster single ecosystem services (illustrated in the glass jar) according to the ecosystem service categories – provisioning, regulating, cultural.

## “Breakfast with treasures from meadows” at the conversation festival “Lampa”

The conversation festival “Lampa” is organised in Cēsis municipality with the aim to provide a platform for inspiring and energising talks and interactive sessions. The festival home is Cēsis castle park and it attracts several thousand participants. In June 2017, BEF Latvia, in cooperation with the Latvian



**Figure 7.1.** Mapping results on the most preferred landscape aesthetics and recreational sites



Fund for Nature, organised a morning session to encourage people to be aware of grasslands and meadows from different and unconventional perspectives. We talked about the benefits that society receives from grasslands, treated participants with a small selection of local products that rely on grassland management practices, as well as involved the participants in mapping of the recreational and landscape aesthetics sites of Cēsis municipality and its surroundings. People were interested to learn about the subject and to recognise their individual relationships with meadows.

In order to support landscape planning in Cēsis municipality, we asked the participants of the session to display their most preferred locations from landscape aesthetics and opportunities for recreation. In order to distinguish between local residents and visitors of Cēsis, the participants received different coloured dots to be placed on the displayed maps (Figure 7.1).

## Conclusions

With this brochure we present a brief overview of the LIFE Viva Grass project experiences and findings in working with people and applying a range of social methods to increase awareness and literacy about the grassland ecosystems and benefits they provide to humans. We interacted with people individually, as well as in groups in three Baltic States to explore their attitudes and preferences and to develop better solutions for sustainable grassland management.

Our project team was committed to promoting the concept of the ecosystem services – a new subject – for the region as well as for the EU. Understanding the concept and making efforts to apply it in rural development, spatial or nature conservation planning was one of the major challenges as well as being exciting to work with. Different techniques and tools and social methods were applied in the course of achieving key objectives – awareness raising about the semi-natural grasslands and raising the capacity of stakeholders to develop policies as well as to plan management measures. The participatory GIS has been increasingly used in recent years due to its potential. Through our experience in Madliena and partly in Cēsis, we found it very appropriate for including stakeholders' perceptions in ecosystem services spatial assessments, incorporating different types of local knowledge, enhancing capacity building and social learning, and integrating stakeholders in a democratic process-oriented approach to decision-making.

In order to achieve success in the biodiversity conservation and implementation of nature conservation measures, it is important to demonstrate the relevance of the issues to the well-being of society. Meetings with Cēsis and Madliena municipalities reaffirm that this aspect is important to integrate nature policies in a broader development context at the respective planning level.

Data and information are important preconditions for generating knowledge and also awareness on the subject. Project activities and particularly the results of the social survey showed that stakeholders value highly or very highly the importance of semi-natural grasslands. Almost everyone is aware that management is needed, though some specific requirements need to be described and presented to people. The stakeholders (farmers and public authorities) consider that financial support is a very important stimulating factor to maintain the semi-natural grasslands as the management of them creates more expenses than income. Consequently, the stakeholders recognise the Rural Development as the key policy for ensuring useful grassland management in future.





# Acknowledgement

The LIFE Viva Grass project team would like to thank all those who actively took part in the project activities. We would particularly like to recognise the local community of Madliena parish and Cēsis municipality who were actively engaged and motivated to learn about the grasslands and ecosystem services they provide. We greatly appreciate this and are looking forward to future cooperation.



The aim of the  
LIFE Viva Grass  
project is to support  
maintenance of  
biodiversity and  
ecosystem services  
provided by grasslands,  
through encouraging  
ecosystem-based  
planning and  
economically  
viable grassland  
management.

[www.vivagrass.eu](http://www.vivagrass.eu)

